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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,575	10/09/2003	Haochuan Jiang	GEMS 0216 PA	2574
27256	7590	12/22/2005	EXAMINER	
ARTZ & ARTZ, P.C. 28333 TELEGRAPH RD. SUITE 250 SOUTHFIELD, MI 48034			HOFFMANN, JOHN M	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/605,575	Applicant(s) JIANG, HAOCHUAN	
	Examiner John Hoffmann	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2005 and 10 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 17-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I in the reply filed on 2 September 2005 is acknowledged. The traversal is on the ground(s) that the photodetector, photomultiplier or photonic crystal would not be produced unless a collimator was a part thereof. This is not found persuasive because the product claim is directed to the collimator assembly, which is just a plurality of tubes. Photodetector, photomultiplier or photonic crystals are not tubes, but rather a fused assembly that was previously a collection of tubes.

Most importantly, Applicant's arguments are merely unsupported assertions that have no evidence or explanation to support the assertions.

Furthermore, the two inventions are distinct because the product claims can be made by a materially different process, such as one where there is no sintering and/or or no dissolving of core elements. For example by an extrusion process.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Examiner could find no support for the newly claimed "sintering a high-z powder and a glass powder mixture to form a first collimator tube".

First it is noted that there is no mention of any "mixture" or "high-z powder" in the specification. Second, the only mention of any glass powder is at [0018] which refers to "the glass powder" but there is no prior mention of this powder: but there is no indication that it is used to form a collimator tube. Moreover, the only prior mention of glass is "high-z glass" (also of [0018]), thus it is deemed that the tungsten powder embodiment is directed to adding tungsten to *the (high-z) glass*.

Third, as per at least claim 4: the tube is glass, but as evidenced by MacCragh 3713816, when silica and tungsten powders are sintered together, the result is a cerment. Thus, MacCragh suggests that to one of ordinary skill reading the present disclosure would interpret that the "powder" embodiment does not result in a glass tube. Thus, the disclosure fails to reasonably convey that at the time of filing that applicants had possession of forming a glass tube by mixing the two powders.

Fourth, as per MPEP 2163 II) A) 2) a) ii)

>The disclosure of only one species encompassed within a genus adequately describes a claim directed to that genus only if the disclosure "indicates that the patentee has invented species sufficient to constitute the gen[us]." See Enzo Biochem, 323 F.3d at 966, 63 USPQ2d at 1615

Thus for the “high-z powder” genus, applicant’s disclosure of only one specie (tungsten powder) does not indicate that patentee had invented species sufficient to constitute the genus. [0018] refers to different embodiments. The last embodiment is directed to sintering tungsten metal powder – there is no other mention or even suggestion of other metals, or other powders. Thus there is no indication that applicant had invented other species which would be sufficient to constitute the genus.

Also, there is no support for the dependent claims which call for a glass tube: because there is no disclosure of any glass tube that is made by two powders. The only disclosure of two powders is for the tungsten embodiment – there is nothing which suggests that such results in a glass. As per MacCragh – the result is a cermet not a glass. Thus it is presumed that one of ordinary skill would NOT interpret that the sintering of tungsten with glass would result in glass.

Claim 9: Examiner could not find anything remotely suggestive of the new limitations added to claim 9.

Claims 4 and 6: as per [0018], there are various embodiments. Claim 1 is directed to a/the powder embodiments. But claims 4 and 6 are directed to other embodiments. There is no basis for combining the embodiments, especially when the powder is described as being “another” embodiment.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1- 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1) The independent claims require sintering a “high-z powder and a glass powder mixture”. Examiner cannot tell if it requires a “glass powder mixture” that is combined with the tungsten, or if it requires a mixture comprising the two powders (glass and high-z). There is no mention of any mixture in the specification so one cannot turn to the specification to tell what is meant.

Claim 5: there is confusing antecedent basis for the powders: it is unclear if they are the same powders mentioned in claim 1, or if they are additional powders. And still further: whether there are two sintering steps – or claim 5 merely further limits the sintering of claim 1.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

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Whereas it is argued that sintering tungsten and glass powders form a glass-tungsten matrix, there is nothing in the record to substantiate that the matrix is actually made, was invented by applicant at the time of the invention, or that it is any different from the cermet disclosed by MacCragh. Nevertheless, even if applicant were to demonstrate a new material/matrix was made by applicant, there is no disclosure of such in the specification as filed. So, it will not influence how one of ordinary skill would read the specification as originally filed. It is presumed the theoretical person of ordinary skill would have possession of applicant's disclosure, and the knowledge that the result would be a cermet tube – not a glass tube.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

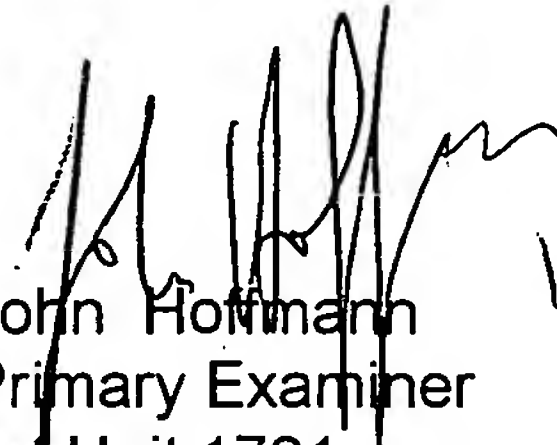
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731
12/14/05

Jmh